- Synchronized signals reduce traffic delay and improve safety while keeping traffic moving along arterials, especially those that go through different cities. Coordinated or synchronized signals reduce stops and delays, and fewer stops mean safer roads and fewer emissions polluting our air.
- Red light cameras installed at some intersections help improve intersection safety by issuing citations to vehicle owners when the camera detects red light running. Chandler, Mesa, Paradise Valley, Phoenix, Scottsdale, and Tempe have installed them at intersections where crashes frequently occur.

Red Light Camera in Paradise Valley

Find out about your commute route

Today, there are several ways you can find out what road conditions might be like on your morning or afternoon commute. Arterials in the Valley have less instrumentation than freeways do, so there is limited arterial information available by calling **5-1-1** or on the Internet at **www.az511.com**. In addition, the following technologies assist travelers with information:

- Dynamic message signs, either overhead or on the side of the road, alert motorists about upcoming construction or closures, or detour information.
- Morning and afternoon radio and television traffic reports compile information from many sources to alert listeners of 'trouble spots' and major incidents. Web sites for local TV news also include a traffic report section.
- Some satellite radio providers, such as XM and Sirius, offer traffic and weather radio channels that now offer customized Phoenix metro region information.

Where to make suggestions or report problems on arterial streets

If you have a concern, suggestion or spot a problem with the traffic signals on one of the Valley's arterials, contact your city's traffic engineering department. The contact information for city traffic departments is also available at the Maricopa Association of Governments (MAG) Web site at: **www.mag.maricopa.gov**.

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MARICOPA ASSOCIATION of GOVERNMENTS

Arterial Street Network

MARICOPA ASSOCIATION of GOVERNMENTS

The Valley's arterial street network is a vital part of the region's transportation system. Residents of the Phoenix metro region rely on arterials to get them to work, school, home and other activities every day. Known for its grid layout, the arterial street network is relatively easy to navigate, but as more vehicles travel on the region's street network, local agencies are compelled to look at ways to make sure these arterials remain safe and efficient, and keep traffic moving.

Valley drivers depend on the region's arterial street network

What are arterials and why are they important?

Major city streets that help to move a lot of traffic across the region are known as arterials or arterial streets. The term **arterials** is used to distinguish these major streets from freeways and from smaller roads, known as local streets, that link local residential or business properties. Arterial streets are usually two, three or four lanes across in each direction, and they are designed to move large volumes of traffic at a relatively steady speed, although morning and afternoon rush hours can make it seem like traffic isn't moving very steadily at all.

Some examples of major arterials are Bell Road, Camelback Road, Glendale Avenue, Rural/ Scottsdale Road, and Arizona Avenue. In the Valley, arterials often go through more than one city or town – a traveler could stay on the same arterial and cross two, three or more city boundaries. A good example is Camelback Road, which goes through Goodyear, Litchfield Park, Phoenix, Scottsdale and parts of Maricopa County.

Red, yellow, green – how traffic signals work

Traffic signals direct traffic to stop or proceed at intersections. Traffic signal systems include several signals at any one intersection, which separates the movement of traffic in different directions. Traffic signals are also used to move traffic along arterials in an orderly way, reduce severe accidents, and provide safe movement along streets at a consistent speed.

In making decisions on traffic signal operations at intersections, traffic engineers consider more than just cars at intersections – traffic signals are set to balance the needs of pedestrians, bicyclists, and buses as well as autos.

You might have noticed that some traffic signals in the Valley have arrows for left turns and some do not. Sometimes those arrows are 'leading' (that is, the green left arrow allows traffic to turn before the green signal light allows traffic to proceed straight through), and some cities use a 'lagging' left arrow, which means the arrow allows left turns after the through traffic is serviced.

Glendale is one of many cities in the valley that monitor arterials from a TMC

The larger cities and towns in the region have their own traffic signal systems, and managing these signals is a key function of their traffic engineering departments. Some cities, such as Mesa, Scottsdale, Phoenix and Glendale, have Traffic Management Centers (TMC) that enable staff to monitor what's happening at each of their city's intersections.

The timing of traffic signals is based on expected traffic flows and are usually preset for different times of the day and day of the week. Cities can also change those if there is an accident, closure, or even a local event such as a parade, golf tournament or ball game. Police or city staff can also change the traffic lights to flashing yellow or red at the controller that is located next to the signal pole.

Emergency signal operations

Some traffic signals are equipped with "pre-emption" or the capability to pre-empt the normal operations – that is, specially equipped fire and emergency vehicles can transmit a signal to the traffic light which, if red, will change to green to allow the emergency vehicle through. Signal pre-emption not only shortens emergency response time but also reduces conflicts between the emergency vehicle and other traffic at the intersections. Not all signals in the region are equipped with this capability.

Arterials Go High-Tech

Some of the most heavily traveled arterials in the Valley are being equipped with additional technologies to help cities better manage traffic, as well as to help drivers keep a steady pace. With more cars traveling on Valley roads, and with little room to add more lanes, new technologies are helping make morning and afternoon commutes easier and safer.

- Closed-circuit television cameras allow city traffic engineers to view what's happening on the road, if traffic is moving at a steady speed, or if there is a major slow-down.
- Dynamic message signs on some arterials provide information about construction, detours, or closures ahead. These are smaller than the freeway electronic signs, but still provide important information to motorists.

Arterial dynamic message sign in Scottsdale